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Using a narrative approach to illuminate teacher professional learning in an era of accountability

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Abstract

Despite the centrality of teacher professional learning in efforts to raise student attainment, little is known about how learning is experienced by individual teachers. This paper uses narrative approaches to explore the professional life history of a mathematics teacher who began teaching in England in the late 1990s. The significance of context is revealed, the inspection regime emerging as a powerful force, shaping professional identity and restricting opportunities for collaboration. Such professional life narratives are a rich resource for biographical work, offering a means to better understand the broader socio-political processes affecting teachers' lives, a crucial step in increasing autonomy.

Keywords: professional learning; performativity; biographies; narrative; professional autonomy; inspection

1. Introduction

Teachers' on-going professional learning is the subject of continued attention yet little is known about individual experiences of learning throughout a career. It is generally accepted that teachers can make a significant difference to student experience and attainment and there is increasing agreement in the research about the most effective means by which teachers might develop their practice (Desimone, 2009). However, there remain issues of provision, access, and participation in professional learning. There is general agreement on the importance of lifelong learning for teachers (see for example Goodall, Day, Lindsay, Muijs, & Harris, 2005). A government inquiry into teacher education and training in England and Wales some forty years ago proposed an entitlement to regular in-service education for teachers of all subjects (James Report, 1972). These recommendations were not adopted. Such calls are now repeated in the global arena (Schleicher, 2011). In Anglophone countries, education is increasingly the focus of government intervention and monitoring, challenging teachers' identities and reducing their autonomy (Day & Smethem, 2009). How does such intervention impact teachers' professional learning?

Mathematics provides a productive space for an exploration of teachers' experiences of professional learning. Currently in England there is no clear picture of provision or participation in mathematics professional learning (Advisory Committee on Mathematics Education [ACME], 2013). Yet mathematics education and mathematics teacher development have been the focus of attention for a number of years, not least because the subject is frequently viewed as necessary for many careers. Furthermore, mathematics is heralded as significant for economic success, both at an individual level and more widely. In the UK, opportunities for mathematics teacher professional learning are patchy (Back, Hirst, De Geest, Joubert & Sutherland, 2009). Taking

mathematics teacher learning as a focus, this paper explores the experiences of one mathematics teacher who started teaching at the end of the twentieth century. Her story both illuminates the professional learning landscape and provides an opportunity for reflection on policy and practice. Although the paper focusses on the narrative of a mathematics teacher in England, it highlights the potential of biographical work in the professional learning of all teachers, transcending disciplinary and spatial boundaries.

In this paper, the reader will see a deliberate shift in vocabulary, from professional **development** to professional **learning**. The aim is to emphasise the active engagement of teachers in learning which is “on-going and in-depth” (Timperley, 2011, p. 5) and to maintain a focus on teacher agency, with teachers responsible for leading their own learning. Through a consideration of the significance of context in studies of professional learning, the potential of biographical study as a tool to aid teachers in (re)creating their professional learning stories is discussed. The paper begins with an overview of research on teacher professional learning, situating this within prevailing performative discourses and considering the implications of these discourses for teacher professionalism. A description of the life history approach and data collection tools follows. The three phases of data analysis and the findings are presented, concluding with a discussion of the emerging themes of performance and opportunities for professional learning.

So much is written about the features of effective professional learning that it is easy to assume that these experiences constitute the everyday experiences of teachers. Nicole’s story exposes the restricted landscape of teacher professional learning in England in an era of performativity and the difficulties in becoming an “activist professional” (Sachs, 2001). Her biography provides teachers with a glimpse into a life other than their own; a comparator with potential to provoke critical reflection. Stories

such as Nicole's "are important because it is through the construction, telling and retelling of our personal stories, to ourselves and to others, that we attempt to make sense of our lives and give them meaning" (Sikes, 2001, p. 90). Such meaning making is an important step in increasing autonomy.

2. Theoretical framework: Teacher professional learning

This study is framed by theories of teacher professional learning and by the concept of identity. The policy background is a significant influence on teacher autonomy over their professional lives, shaping perspectives on the contested concept of teacher professionalism. In this section, the relationship between these concepts is outlined.

Internationally, there has been much criticism of traditional forms of professional learning for teachers, frequently described as based on a training or deficit model and characterised by one-off courses by external providers (Hoban & Erikson, 2004). Such courses aim to rectify a perceived deficit in knowledge or skills (Clarke & Hollingsworth, 2002). A comprehensive review of teacher professional learning commissioned in New Zealand notes these courses often employ a language of "delivery" (Timperley, Wilson, Barrar, & Fung, 2007). Frequently linked to policy changes, such courses require little active engagement by participants, are costly, and have been found to have limited impact in reviews of research in the United States (Borko, 2004) and New Zealand (Timperley, 2011). There is a rich history of alternatives to these "traditional" models in England, for example those arising from the work of Lawrence Stenhouse and John Elliott on classroom-focussed curriculum development and action research (McLaughlin, 2013). In mathematics, there is evidence from the 1980s of a wide variety of support for professional development.

This professional development included school-based support, work with teachers from other schools, involvement in professional associations, support from advisory staff, links with higher education institutions, courses, and the use of research (DES, 1982). Mathematics teachers today access a range of courses, participate in a variety of professional learning activities within school, and network beyond their schools (Back et al., 2009). However, participation is “variable and geographically inequitable” according to the Advisory Committee for Mathematics Education (ACME, 2014, p. 1), an independent body advising on policy. In mathematics, as in other subjects in England, there is no strategy for career-long professional learning, no plan to support teachers to direct their own learning through their careers.

The availability of professional learning opportunities is but one part of the multi-layered environment within which teachers work and learn. Taking a situated perspective aids a close examination of teacher learning, one which considers the broader socio-cultural context within which learning and practice take place, the individual teacher’s knowledge and beliefs, the learning opportunity, and the complex interactions between them. Such a perspective is conceptualised in Clarke and Hollingsworth’s (2002) interconnected model of professional growth, a model which encompasses a wide variety of learning opportunities, highlighting the role of an individual’s knowledge and beliefs within the broader socio-cultural context. This model reveals the multiple possibilities for teacher learning, accounting for variation in teacher growth. In their recent comprehensive review of research into mathematics teacher professional learning, Goldsmith, Doerr, and Lewis (2014) utilised the Clarke and Hollingsworth model, confirming the incremental, iterative nature of teacher professional growth and highlighting variation between individuals and across contexts. Complex systems theory acknowledges that events and actors interact in different ways

with multiple possible outcomes, thus highlighting the dynamic nature of the professional learning environment, considering the influences on the individual, the school, and the learning activity and the way these nested systems interact (Opfer & Pedder, 2011). This theory adds depth and complexity to the Clarke and Hollingsworth model, better representing the lived experience of professional learning. Detailed consideration of the extent of the impact of the external environment on teacher learning is limited in these models, yet research demonstrates the situated nature of teacher professional learning (Borko, 2004; Timperley, 2008).

2.1 Professional identity

The dynamic process of identity development is a significant aspect of professional learning and a growing focus of research on teachers (Beijaard, Meijer, & Verloop, 2004; Black, Mendick, Rodd, Solomon, & Brown, 2009). Despite this aspect, there are considerable challenges in attempting to define the term, with Beijaard et al. (2004) noting that in their review of studies focussing on teacher professional identity almost half (10 out of 22) gave no explicit definition, with the remainder highlighting different aspects in their definitions. They propose the following as essential features of teacher professional identity: it is an ongoing process; it is individual yet influenced by context; it is composed of sub-identities; and it is agentic (Beijaard et al., 2004).

A discussion of the features of teacher professional identity is developed further in a dialogic approach, one which conceptualises teacher identity as a complex, ongoing social process, involving multiple voices or positions, and featuring discontinuities as individuals engage in internal dialogues with these different selves (Akkermann & Meijer, 2011). In this approach, an early understanding of identity as singular, continuous, and individual is combined with postmodern perspectives of shifting,

multiple identities, located in social settings, and with evident discontinuities. Self-narratives or inner speech allow individuals to hold on to a vision of themselves as stable, providing “continuity of identity” (Akkermann & Meijer, 2011, p. 313), whilst simultaneously experiencing identity shifts and discontinuities in response to particular situations. This narrative definition of identity, focussing on identity as “stories about persons” (Sfard & Prusak, 2005, p. 14), foregrounds human agency whilst acknowledging that there is no one story but rather a multiplicity of stories. Identity is not static, rather it is a constant negotiation of our individuality and the practices of communities (Wenger, 1998). Identity is viewed as a vision of experience rather than the experience itself, making “discursive counterparts” of our lived experiences (Sfard & Prusak, 2005, p. 17). Learning is the means by which we move from our actual identity towards our designated identity, or expected state. Crucially, such designated states are not always chosen or desired; although they are often perceived as inevitable and are resistant to change. Our choices are framed within a network of power relations; Mendick (2006) uses “identity work” to emphasise this theory, seeing “our choices as producing us, rather than being produced by us” (p.23). Professional identity formation, then, must be seen as situated within the particular context and discourses of education.

Our narratives about ourselves are shaped both by the stories we tell about ourselves and the stories others tell about us. Significant others influence the way we view the world, motivating us to act in certain ways (Akkermann & Meijer, 2011). We construct our identities in relation to others; “the most significant stories are often those that imply one’s memberships in, or exclusions from, various communities” (Sfard & Prusak, 2005, p.17). Developing an awareness of this process through locating self-narratives in the socio-cultural world of teachers’ work has potential not only for

furthering an understanding of teacher professional identity but as a tool for teachers to engage in their own professional learning. The contexts within which teachers live and work have received limited attention in studies of professional identity (e.g. Beijaard et al., 2004). Yet, it is becoming clear that communities of practice and wider educational policy environments play a role in identity construction.

2.2 Professional autonomy in an era of performativity

Increasing globalisation, together with neoliberal political agendas in the UK, create an “audit ideology” (Groundwater-Smith & Mockler, 2009, p. 5) within which teachers and schools are constantly measured and ranked. A key feature of this agenda in England is a system of inspection introduced by the 1992 Education (Schools) Act. Teams of independent inspectors, operating under the auspices of the Office for Standards in Education (Ofsted), conduct lesson observations and judge schools’ performance. Initially schools were graded on a seven-point scale, from *excellent* (grade 1) to *very poor* (grade 7) (Elliott, 2012); by 2015 this had been reduced to a four-point scale, from *outstanding* to *inadequate* (Ofsted, 2015). In England, teachers’ work has been “the subject of more intensive and sustained central government intervention than any other [country]” (Day & Smethem, 2009, p. 141). Earlier technologies of professionalism and bureaucracy have been replaced by the new technologies of the market, managerialism and performativity. This latter is characterized by monitoring systems and the production of information; “performativity is a technology, a culture and a mode of regulation that employs judgements, comparisons and displays as a means of incentive, control, attrition and change” (Ball, 2003, p. 216). Within this culture an individual’s performance, for example during inspection, becomes significant, representing their value within that performative frame of reference. The

pervasiveness of this performative technology is difficult to resist. Increasingly teachers and institutions use their Ofsted grade as a key descriptor and there is much attention focused on how to move from “good to outstanding.”

Studies exploring the impact of accountability systems on school cultures and on individuals’ professional lives around the world appear to confirm that the “epidemic of reform” changes who teachers are as well as what they do (Ball, 2003, p. 215). The stories that teachers tell about themselves and others, and those told about them as they work to author themselves, are framed within these performative structures. The following examples illustrate this phenomena. The challenge of reconciling beliefs with the neoliberal agenda operationalised in school was charted in Loh and Hu’s (2014) narrative of a beginning teacher in Singapore. Lambert, Wright, Currie, and Pascoe’s (2015) study of arts education in Australia found teachers subject to constant surveillance, with evidence of a “data-driven pedagogy” (p. 473). Access to arts subjects was restricted, as the schools focused on English, mathematics, and science. In Hall and Noyes’ (2009) case study of a large comprehensive school in England, Ofsted grades and descriptors were the accepted ways of talking about teaching. The inspection process was adapted, forming the school’s own quality assurance system. The system of observation and auditing by the senior leadership team, once established, was devolved to department heads. The omnipresence of inspectors is revealed in Clapham’s (2015) study focussing on the way inspection impacted two teachers’ lives; even when inspectors were not physically present, inspection was seen to drive much of the activity in the school.

The effect of reform is “to erode teachers’ autonomy and challenge their individual and collective professional and personal identities (Day & Smethem, 2009, p. 142). In such an environment, spaces for teachers to reflect on themselves as teachers

and as teacher learners are important. The need for such critical examination becomes more important even as it becomes more difficult.

2.3 Perspectives on teacher professionalism

The concept of professionalism in teacher development is complex and contested. Debate focuses on the interrelated concepts of knowledge, autonomy, and responsibility; the nature of professionals' work means they need specialist knowledge and autonomy to exercise judgement with responsibility (Furlong, Barton, Miles, Whiting, & Whitty, 2000, p. 5). Changes in the nature of knowledge for teaching together with changes in teacher autonomy affect teacher professionalism. A dominant discourse is that of a managerial perspective enforced through a process of compliance with teaching standards (Kennedy, 2007; Sachs, 2001). In England this "demanded professionalism" maintains a focus on teachers' behaviour rather than attitudes, knowledge, or understanding (Evans, 2011, p. 863). This concept restricts opportunities for democratic professionalism which has collaboration at its core (Whitty, 2006). Instead, attention is directed towards professionalism as an individual venture, aimed at meeting standards. In response, emerging from the discourse of the democratic professional, there is a call for teachers to develop an activist professional identity (Sachs, 2001). Acknowledging the challenge, Sachs advocates the construction of reflexive self-narratives exploring the social and political contexts of teachers' lives, together with the support of communities of practice. This perspective aligns with a narrative definition of identity developed earlier and echoes the exhortation from a study of the professional identity of both teachers and nurses in England that "Professionals must re-story themselves in and against the audit culture" (Stronach, Corbin, McNamara, Stark, & Warne, 2002, p. 130). The value of auto/biographical

study in developing autonomy in an era of performativity and the potential of such re-storying are explored in this article.

3. Methodology

This paper draws on research from a larger study focusing on the sense that women mathematics teachers made of their professional learning over their careers (Author, 2013). This research arose from the researcher's own experience as a mathematics teacher and the desire to increase knowledge of women mathematics teachers' experiences of professional learning, and to explore how their individual stories are socially situated. Teachers' agency over their professional learning is shaped by the wider social and cultural context in which they negotiate their lives (Holland, Lachicotte, Skinner, & Cain, 1998). Thus, consideration of alternative perspectives on context can serve to aid reflection. This study sought such alternatives to support individuals in their on-going work on identity, "the way we make sense of ourselves to ourselves and the images that we present to others" (Day & Kington, 2008, p. 9). The research questions that frame the current study are:

- What are women mathematics teachers' experiences of professional learning? What do they perceive as significant in this learning? Do they identify critical persons and/or critical phases?
- Does their professional learning help teachers to situate themselves in the mathematics community? Does it help them develop their identity as mathematicians or mathematics teachers?

The focus on women teachers in the main study was deliberate, aimed at exploring how women negotiated the tensions in doing mathematics and being female, navigating a subject often closely associated with masculinity (Mendick, 2006). This research

utilises a narrative approach to preserve the stories of the individual narrators, providing insights into their experiences of professional learning and identity development.

Ethical issues were considered in accordance with guidelines from the British Educational Research Association (BERA, 2011) and approval obtained.

A life history approach (Cole & Knowles, 2001; Plummer, 2001) offered the potential for rich narratives of teachers' experience. There are many examples of life history and narrative approaches being utilized to explore the careers of teachers (Halse, 2010; Thomas, 1995; Nias, 1989). These approaches begin with life stories "an account of one person's life in his or her own words" (Plummer, 2001, p. 18) or "lives interpreted and made textual" (Goodson & Sikes, 2001, p. 16). These interpreted lives become "life histories" when they are borrowed and re-interpreted, with a contextual layer added by the researcher. Life history inquiry may be viewed as "a dialogic event where participants act together in an ongoing, non-linear process that leads towards the construction of an account" (Shacklock & Thorp, 2005, p. 157). Such an approach is consistent with the theoretical framework outlined above, where identity is also understood dialogically. The concern was to elicit teachers' stories of their professional learning experiences, to work with them to construct personal life histories, and to engage them with this process through the verification of transcripts and narratives. This co-construction formed a key part of the design of this study.

3.1 Participants and data collection

In this article the data from one teacher are analyzed to exemplify the significance of context in professional learning. Nicole was one of four women secondary mathematics teachers in north-west England who participated in the main project. Each had at least ten years teaching experience. Nicole (a pseudonym) began

her teaching career towards the end of the 1990s. As is common in life history research, chance or “happenstance” (Miller, 2000, p. 76) played a role in the identification of participants. The researcher knew Nicole professionally, having met her through work as an academic tutor in a university. While a key consideration was the quality of the research relationship, the goal was to “work thoroughly, meaningfully, and authentically” (Cole & Knowles, 2001, p. 67) with a small number of participants rather than gaining more restricted glimpses into a greater number of lives.

Data collection took place in 2011-12, comprising two “guided conversations” (Cole & Knowles, 2001, p. 72). These conversations can be characterised as semi-structured interviews, using questions and prompts (see Appendix A for the interview prompts from the study) to guide discussion on identified topics whilst permitting the freedom to improvise, ask for clarification, or explore interesting topics in more depth (Arksey & Knight, 1999). The guided conversations began by requesting that Nicole talk about an early experience of learning mathematics and construct a “time-line” (Goodson & Sikes, 2001, p. 30), noting significant phases and events in her experience of learning mathematics. In order to explore Nicole’s experiences of professional learning, she was asked “How have you learnt how to be a mathematics teacher?” and “What sources of support do you draw on as a mathematics teacher?” Follow up questions probed these responses and asked about aspects of professional learning which had not yet been discussed. An example of this was a supplementary question of professional learning opportunities beyond those available in school, prompting Nicole to consider networks, collaborations, courses, and other opportunities that were significant for her.

3.2 Data analysis

Data analysis was conducted in three broad phases throughout the research: an initial phase encompassing the interview conversations and transcription; an immersion phase; and a final phase of re-presentation. In the initial phase, Nicole began to analyse her experience, both through the accounts she gave in response to prompts and in subsequent interpretations as she made new connections or came to new understandings (Kvale & Brinkmann, 2009). This reflection on experience, encouraged by interview questions and prompts, was often marked by expressions of surprise. Also in this phase, the researcher listened to Nicole's stories, responding with questions and clarifications during the initial and subsequent meeting. During the immersion phase a biographical time-line was developed, with both historical data and participant validation aiding the verification of the narrative. The coding and categorization of data aided analysis although ultimately these fragments were unified in the narrative. Such stories "rather than codes better captured the distinctiveness of each account" (Mendick, 2006, p. 38), preserving human agency, coherence, sequential, and structural features of the story (Riessman, 2011). In the final phase, further contextualisation located the narrative in relation to contemporary developments in education. A key concern was to privilege Nicole's voice, to preserve the notion of life history as a "dialogic event" where participant and researcher co-construct accounts (Shacklock & Thorp, 2005, p. 157). The stories, reconstructed and contextualised through the use of a biographical time-line and in relation to historical developments, were combined into one personal experience narrative and returned to Nicole for review.

Interestingly, the theme of performativity, although not originally a focus of the study, emerged in the teachers' narratives in the main study, seeming to restrict opportunities for autonomy in professional learning. In this paper, the narrative of one

teacher, Nicole, has been selected to exemplify the significance of context, highlighting the insights that can be gained from auto/biographical study of professional learning. While Nicole's story is unique, it illuminates themes recognisable in the stories of the other participants in the larger study.

4. Nicole's story

In her early thirties, Nicole had begun teaching in the late 1990s and had been teaching for 12 years. She had held posts of responsibility for more than half of this time, including two years as Head of the Mathematics Faculty. In the following sections, excerpts from Nicole's narrative are shared, thus highlighting the significance of context. In Nicole's narrative the omnipresence of Ofsted emerges throughout her early teaching experiences, beginning in her initial teacher education. She sees these inspections as validating her practice but as she retells her story she reflects on their influence on the broader environment for professional learning. These reflections help her to articulate the support she needs in order to continue to learn. The narrative focuses first on how Nicole learnt to teach, then on the prominence of Ofsted. Finally, fragments from the data are used to illustrate the sources of professional learning and support that Nicole reports as significant during her career.

4.1 Beginnings: Learning to teach

After gaining a degree in mathematics and humanities, Nicole chose to take a Post Graduate Certificate in Education (PGCE) in secondary mathematics in order to qualify as a mathematics teacher. Nicole recalls several significant figures during her PGCE course; as she talks, Nicole reflects on how these experiences may have impacted

her current practice. The mentor in her first placement school was particularly influential:

[She] would put her Year 11's into groups and she would do a lot of [...] she would pair, share and you can take your answers to there while they peer assess this and all the rest of it and her lessons were quite dynamic and quite active [...] I probably did learn a lot from that actually, for how I do stuff now, in retrospect.

She recalls that trying to follow the uninspiring, fixed approach dictated by her mentor in her second school placement was challenging. As this differed from the approach advocated by her university tutor, she was forced to work to two different standards or philosophies of teaching.

NICOLE: At my second school, my mentor was very much "You show 'em this, and if they don't get it the first time you show it [to] them again and then once you've done that you give them a worksheet with three to five examples on, or ten if it's not going to take them long, so that you fill your lesson, and then at the end you go over the answers" [...] when your tutor came in that was their idea of a failing lesson so we were all, again, very well aware that we had to kind of tread this careful path, because you wanted your mentor to make your week by week write up good, but you wanted your pupils to be prepared for what you are going to have to do to get a good grade off the tutor when they visited. [...] "Oh my goodness, teaching must be a bit mad, you know because we already trying to deceive two people and we are only on placement, you know, what is it going to be like when we are actually fully fledged you know? Is it always going to be this crazy?" Because that's why it felt really crazy, trying to

INT: trying to please different people?

NICOLE: play two cards at the same time and then Ofsted came in and kind of said the same thing. I remember, we were in the staff meeting after they'd had the initial feedback from Ofsted and the Head Teacher stood up and cried, the Head Master, so, and we watched him crumble and then our mentor shuffled us out of the room and shut the door on us.

The inspection team found the school to have significant weaknesses, confirming for Nicole her reservations about the teaching she had observed: "What Ofsted said made a bit of sense to us but [...] because you are not even qualified, you can't even begin to come out with what you are thinking." Although Nicole's initial teacher education is not the focus of this article, her experiences of Ofsted during this time reveal the exposure of beginning teachers to the inspection regime: both her assigned schools were inspected by Ofsted during her placements, the first one being placed in "special measures" as it was deemed to be failing to provide an acceptable standard of education (Great Britain, Schools Standards and Frameworks Act, 1998, Part 1, Ch.IV).

Nicole was in the first cohort of teachers in England to follow the prescribed induction process for newly qualified teachers (NQTs). Her induction was led by a "brilliant" assistant head and by the head of mathematics, a teacher who Nicole describes as having little interest in students' mathematics learning as long as they were on task. Several years later, on moving to a school nearer home, Nicole took on additional responsibility in mathematics. Although the mathematics results were below those for other subjects in the school, Nicole saw this as providing her with significant learning opportunities, her appointment coinciding with the early years of the Key Stage 3 (KS3) National Strategy. One feature of the KS3 National Strategy was the deployment of mathematics consultants to work alongside teachers in under-performing schools, supporting planning and teaching; this support was positively received by

teachers (Ofsted, 2003). Nicole describes this as “a truck load of local authority support” including a consultant whose “job was kind of to open your minds about how you would go about teaching.” At the same time, a senior teacher in the school offered Nicole further encouragement in the face of the diffident voices of colleagues, encouraging her to “Just try it, just try anything,” communicating a belief that “If you take risks and it doesn’t pay off, it doesn’t matter because you’ll do it differently next time and you’ll learn from that.” Nicole reports that both this senior teacher and the mathematics consultant were important figures for her development as a mathematics teacher, encouraging her to try new approaches and deepen her understanding. They appeared to play a key role in her development at a time when the school struggled to recruit and retain specialist mathematics teachers, thus limiting other sources of support. As elaborated in the discussion below, context emerges as significant in Nicole’s story as she struggles to reconcile conflicting notions of what constitutes *good* mathematics teaching within a changing policy environment, where policies relating to inspection and induction impact on practice and shape professional learning. The next section focuses on Ofsted, showing how context can act to constrain teacher autonomy.

4.2 Preparing for Ofsted: Charting a career

In addition to the significant figures of the senior teacher and mathematics consultant, Nicole talked at length about one particular lesson with a year 9 class. She referred to this lesson as her “last Ofsted lesson,” initially describing it in some detail as part of the time-line activity during the first guided conversation. She chose to teach algebra, a subject under scrutiny as concerns over the skills and understanding of undergraduates focussed attention on the curriculum and on teaching in secondary schools (Royal Society, 1997).

Everyone thought I was mad ‘cause I decided I was going to do algebra for Ofsted and the rest of my faculty thought I was insane, absolutely insane, but I got a one for my lesson so [laughter] which was all that anybody really minded. So it was algebra, what were we doing, substitution? [...]. And I did, a card sort and I had differentiation by colour and because Ofsted were in the room the weaker ones in the group, when I said right, ok the orange cards, or whatever it was, are for the most able in the room so you know, aim for it, aspire to it or something like that I worded it as, and because the Ofsted guy was in the room every one of the 35 students crammed in this little classroom felt obliged to do it.

Pupils were challenged to extend the activity, writing their own examples and being prepared to explain their work to others. Nicole found that:

The freedom that they had brought out so much higher level thinking [...] and the level of mathematics was far higher than anything I probably would have risked doing with them, so I do more of that now, that’s what I’ve learnt, because they enjoy it.

Returning to this lesson several times in the research conversations, Nicole appears to use it as the enactment of her espoused philosophy of mathematics. She acknowledges that the students increased the challenge in the mathematics beyond the level she would have felt comfortable with, using the validation of the Ofsted inspector to support the shift in her practice which follows.

Ofsted appear to play an important role throughout Nicole’s teaching career, providing validation, an external perspective on how she, and others, are performing. For Nicole, Ofsted featured so much in her account of learning to teach:

Probably because, it's when you're absolutely at your best isn't it? And it's probably the points in my teaching career that filled me with the most fear and therefore you remember the most. [...] it doesn't matter how well trained you are or how well you know your job until you've actually been through an inspection I don't think you ever believe any of the feedback you get from people that you work with.

[...] I know I do alright at my job so it kind of gets verified, that you are allowed to think that you are good at your job.

Then it makes you feel a bit more safe about things.

Nicole notes how crucial a good outcome in the inspection has become for the whole school:

I think any school that you work in now, you kind of do spend three years building up to Ofsted and then as soon as they've gone you start to prepare for the next one virtually 'cause it's so, it's such a big deal isn't it to the survival of your school and you know it is, it's just massive.

Nicole remarks here on what Perryman (2009) describes as a “state of perpetual readiness” (p. 629). Such preparedness is a feature of a performative culture which can result in the real issues being obscured. Instead, attention is directed at the performance required by inspectors, and increasingly, by senior leaders in schools (Hall & Noyes, 2009). Perhaps in part because of her early experience of Ofsted, Nicole appears to accept the judgement of the inspectors, welcoming their validation of her practice.

4.3 Support for professional learning

Nicole gains further support for her development as a mathematics teacher from colleagues, in the informal sharing of problems and resources. She values this informal

support, “the pooling of ideas and the moral support and the camaraderie” far more than formal processes. Absent from Nicole’s narrative is any discussion of structured time working with colleagues on mathematics or on mathematics teaching. When prompted about this, Nicole’s response implied that a sense of competition with other schools curtailed local networking: “I don’t know whether it’s the kind of competitive nature of inter-school stuff [...] but there isn’t much [contact with other schools] [...] outside sources don’t tend to be something that I would view as support.” Nicole describes working in her current department as her “happiest as a maths teacher.” She says “we know we’re all good [...] all really, really committed and I don’t think anyone in this faculty is less than a two in Ofsted criteria either.” Nicole remains dissatisfied however, noting that although in the “age of being accountable” it is “very easy to just go through your performance management cycle, tick your boxes off as satisfactory and carry on regardless and just sort of plod through,” this is insufficient. What is missing for her is an ongoing conversation, space to reflect on practice and learn from teaching. Critical reflection on practice is acknowledged as important for teacher learning (Tripp, 2012; Brookfield, 1995) and, in some circles at least, teaching is viewed as “disciplined enquiry,” requiring “ongoing study of oneself” (Mason, 2009, p. 205). However, making time for this reflection seems to be difficult.

When asked what helped her to develop as a mathematics teacher, Nicole responded “I suppose in terms of my own personal CPD, because I’m the most experienced person here now, it is something that I take more personal responsibility for than anything else.” Despite her apparent success, she wants more. Drawing on the conversations she has with student teachers to support their reflection on practice, Nicole expresses a need for similar mentoring opportunities herself.

I miss somebody actually keeping me on my toes and pointing, you know just sometimes when you going through your career there are those people who kind of signpost you to “I think you’d be really good at such and such next” and I kind of miss that now.

At the time of her participation in the research, Nicole had begun a Masters in Education; the focus on reflective practice in the first module of this course was continued in the interview and as Nicole sought challenge in a new job.

Engagement, or encouragement to engage, with mathematics-specific learning opportunities appear limited. However, Nicole notes that in the days of the National Strategies, she was encouraged to network with mathematics teachers from local schools, working collaboratively on developing materials for numeracy across the curriculum. Such collaboration beyond the school is less important for her now that the department is fully staffed and she herself has more experience; she reflects that much of her learning about mathematics has come through teaching and notes that she feels ‘quite self-sufficient’ in her work now. Despite being prompted for examples of support or engagement with networks either within or beyond the school, there is a notable absence of opportunities to collaborate on mathematics in Nicole’s narrative. Performative structures appear to close down opportunities for collaborative work and the story that emerges is one of a teacher working alone in her classroom.

5. Discussion

The discussion focuses on two themes which emerge from Nicole’s story, the first, the pervasiveness of the inspection regime, the second, the availability of opportunities for professional learning. Encounters with Ofsted are threaded throughout Nicole’s narrative, facilitating a consideration of the way in which prevailing

performative discourses may impinge on professional identity formation. The narrative also reveals the presence/absence of opportunities for professional learning, with performative discourses implicated in both the provision of such opportunities and in their curtailment.

5.1 Performing

The external environment is prominent throughout Nicole's narrative: there is a sense in which Nicole has been subject to the "mechanics of performativity" (Ball, 2003, p. 220) from the start of her initial teacher education. Ofsted inspected both of her placement schools whilst she was there and although she, as a student teacher, was not observed, she saw first-hand the impact of the inspections. In her recollections, Ofsted appear to play an important role in helping Nicole to align the conflicting perspectives of university tutor and school mentor; the inspector's judgement confirms Nicole's own view and contributes to her developing professional identity. For example, she describes the door being shut on the student teachers as they were ushered out of the staffroom after hearing feedback on an Ofsted inspection, thus highlighting the difficult territory they inhabited. The student teachers were not sufficiently part of the school culture to be included in subsequent discussions and were therefore left to determine for themselves what the inspectors' decision meant. Nicole's induction into teaching is an induction into a performative regime as she witnessed those around her subject to the judgements of outside agencies. As she described earlier, constant judgements and the fabrications that this entailed are apparent to Nicole even during her school placements on her PGCE, as she is "already trying to deceive two people" with differing philosophies of teaching (university tutor, school mentor). Her focus on learning to teach is diverted by her awareness of the need to perform, to get her pupils

“prepared for what you are going to have to do to get a good grade off the tutor when they visited.”

Nicole struggles to make sense of the teaching she observes and, later, her own practice. It is hard to discern Nicole’s philosophy of teaching since a successful teacher by performative measures means “I got a one for my lesson.” Perhaps this should be no surprise as inspection outcomes seem to dominate school life. In this environment of “structural and individual schizophrenia of values and purposes” (Ball, 2003, p. 223), how else can Nicole know if she is good at what she does? She has learnt to teach in an era where the judgements of others frame and constrain practice. Ofsted are the highest authority, validating practice: what counts is the Ofsted grade, particularly in “under-performing” schools. And yet, despite the pervasiveness of the inspection agenda, there is also evidence of Nicole exercising agency. At these times, the support of a more experienced teacher acting as her coach facilitated her learning, giving her “permission” to take risks with her teaching. The voice of this teacher informs Nicole’s response to experimentation, illustrating the ongoing “social-individual dimension of identity” (Akkerman & Meijer, 2011, p. 315).

The Ofsted lesson is given prominence by Nicole in her narrative, the “performance” for inspection has become a real part of who she is. Although Nicole characterized her decision to do algebra for Ofsted (note the deliberation here, a special lesson produced for the inspection) as taking a risk, there is also a sense in which it is a carefully researched safe choice, adopting pedagogical approaches valued by the inspecting body. Nor is Nicole alone in this; Clapham (2015) notes the development of “identikit inspection ready lessons” (p. 625) and a general aversion to risk taking as features of the inspection regime. Nicole’s account of her lesson, with its mixture of

agency and performativity, is further evidence of the tensions and contradictions in policy and practice.

Relationships with colleagues also bear witness to value conflict, with teachers and schools set in competition even as they seek collaborative partners. Although Nicole notes the benefits of informal contact with colleagues within her school mathematics department, there is evidence that these relationships have a performative edge. Judgements, for example the latest Ofsted grade, have become part of who teachers are: no-one “in this faculty is less than a two in Ofsted criteria.” There is little evidence of these teachers’ beliefs of mathematics, for in this era of performativity “Beliefs are no longer important – it is outputs that count. Beliefs are part of an older, increasingly displaced discourse” (Ball, 2003, p. 223). Accountability systems result in the curtailment of collaboration as schools are forced to compete against each other, further limiting scope for democratic professionalism (Whitty, 2006).

Context, both school systems and the wider accountability regime, is significant throughout Nicole’s narrative, influencing her practice, her identity as a mathematics teacher, her professional learning, and her relationships with students and with colleagues. Her life history highlights the complexity of a teacher’s working environment in a way that much earlier research focussing on the micro context of particular professional learning activities or programmes failed to do (Opfer & Pedder, 2011). In this case, Nicole’s narrative provides evidence of the pervasiveness of performative discourses.

5.2 Opportunities for professional learning

Nicole’s narrative reveals that much of her professional learning is informal, with few opportunities for collaboration. Beyond her initial teacher education her

engagement in formal mathematics professional learning comprised two activities, both under the auspices of the KS3 National Strategy. The narrative provides evidence of the variability in access to and participation in mathematics professional learning noted in the ACME report (ACME, 2014). Nicole does not mention any mathematics courses or within-school initiatives and the one network that she participated in was not sustained, in part due to the “competitive nature of inter-school [relationships].” Considering the broader context within which teachers work helps to account for this restricted participation; the focus on performing well for Ofsted drives much of the activity in the school. Learning to teach in an era of accountability appears to close down opportunities because anything that is not focussed on the inspection is marginalised. A nurturing learning environment is one of the characteristics of learning organisations (Opfer & Pedder, 2011). However, in Nicole’s account of her professional learning the environment appears constrained by the policy context beyond the school. The omnipresence of inspectors (Clapham, 2015) influences how teachers see themselves, leading to a taken-for-granted way of thinking and talking about practice. Ultimately, Nicole is dissatisfied by this aspect; the “continuous and sometimes conflicting interplay” (Opfer & Pedder, 2011, p. 389) between her practice, experiences, and beliefs has led to dissonance. Nicole “got outstanding” but does not see herself as outstanding, expressing unease at a judgement that appears to close down possibilities for further learning. Nicole seeks to resolve this dissonance through further study and a new, more challenging job.

Knowledge of the conditions which enhance the likelihood of effective professional learning has increased (see for example Back et al., 2009). However, what about those, like Nicole, who have limited engagement in (and access to) formal mathematics professional learning? Understanding the ways that teachers learn

informally, for example through teaching, is increasing, with reflection seen as a key element (Leikin & Zazkis, 2010). Mason (2010) highlights the importance of spaces for reflection on experience in enabling change, supporting teachers to begin to re-imagine the practice of teaching. Nicole's narrative is evidence of the challenge of making space for such reflection on practice. Spaces for working on and thinking about mathematics and for developing a philosophy of mathematics learning are intermittent in her story, with little opportunity for on-going identity work.

Nicole draws heavily on models and anti-models (Williams, 2011, p. 140), teachers from her own school days, her initial teacher education, and current school context who are particularly important figures in her own identity work. These more experienced others play a significant role in supporting teachers to take a more active role in their professional learning, for example by encouraging risk-taking. For Nicole, this risk taking has become part of who she is, as evidenced by the senior teacher's urging to "just try it" incorporated in her self-narrative. Although these figures were featured in the early years of her teaching career, her current community of practice appears restricted, with limited access to more experienced mathematics teachers. Nicole's reflections on her role as mentor to students on initial teacher education courses enable her to identify what is missing from her own professional learning, highlighting the lack of a mentor, one with a focus on her professional learning as a mathematics teacher. Thus, she acknowledges the role of significant others in helping her see who she might become, their voices helping her to work on her "self-narrative" (Akkerman & Meijer, 2011). Changes in the landscape of professional learning make it more important that teachers have access to mathematics mentors, whatever stage of their career. Nicole's professional learning opportunities can be categorised as transitional, partway along a spectrum of models ranging from those opportunities

aiming to prepare teachers to implement reform (transmissive models) and those which support teachers to engage actively in shaping policy and practice from an informed, critical stance (transformative models) (Kennedy, 2005).

Narrating her story helps Nicole to acknowledge her learning needs. The articulation of these needs is an important first step to action, one that signifies a shift towards transformative professional learning (Kennedy, 2005; Sachs, 2011). She comes to the second conversation having interrogated her memories further, seeking out alternative perspectives and discussing significant events with others. There is little evidence of rich opportunities for professional learning within the current school setting in Nicole's narrative and perhaps in response to this absence she exercises agency, engaging in professional learning beyond school. The construction and study of teachers' narratives allows a critical reinterpretation, drawing attention to significant features, which, once noticed, are more available for us to work on (Mason, 2002; Tripp, 2012). Nicole identifies herself as a mathematics teacher, firmly located in her current school context. She reflects how "you end up bound by what you do and where you do it," and although she has been judged as successful, she seeks more, searching for a challenge in her search for a new job. Reading and constructing narratives like Nicole's may provide teachers with an opportunity to look back and reflect on their own professional learning, examining the context of the socio-political processes that affect their everyday lives.

6. Conclusion

In summary, the findings are briefly revisited in relation to the research questions. The first question centred on teachers' experiences of professional learning. Nicole's professional learning is largely informal, with few opportunities for

collaboration. Significant figures in her learning include a mentor in her initial teacher education, a mathematics consultant, and a senior teacher in her current school, each encouraging her to experiment with new approaches. The second question explored the extent to which professional learning helped teachers to situate themselves in the mathematics community. The data presented in this paper suggest that, for Nicole, this community is limited to informal sharing with colleagues in her own school, any contact beyond the school seemingly constrained by performative structures. Perhaps unsurprisingly, this view of collaboration results in her strongly locating her professional identity within her school, detached from broader debates in the mathematics education community.

Concerns have been raised about the impact of accountability measures on mathematics teacher professional learning (ACME, 2013). Nicole's narrative illuminates one lived experience of professional learning, with the inspection regime emerging as a constant powerful force, shaping her professional identity and restricting opportunities for collaboration. Evidence from previous studies suggests the school has a role in enabling and constraining teacher professional learning (Opfer & Pedder, 2011). In Nicole's story, the ways in which the wider policy environment impacts the organisation and the individual within it are revealed. Participation in mathematics teacher professional learning over a career is portrayed, featuring occasional support for collaborative teaching, informal support from colleagues, and limited participation in mathematics-specific learning opportunities. Accountability measures appear to constrain opportunities for collaboration beyond the school.

The results of the research presented herein demonstrate the potential of narrative approaches in studies of teacher professional learning. Nicole's story of learning to teach (and of becoming a teacher) offers all teachers an example to compare

to their own stories, thus aiding reflection on issues such as engagement in professional learning and the extent of their collaboration with colleagues. By developing life histories and situating individual stories within the social-historical context, teachers, together with those who support teacher learning, can turn their gaze from the individual narrative to a consideration of the complexity of professional learning. Identifying the influence of the inspection regime on Nicole's professional life has the potential to inform a critical view of the wider school context. Starting from narratives such as Nicole's and proceeding to the re-construction of their own professional life stories may help teachers develop learning communities. With access to rich accounts of teachers' lives, assumptions about practice are forced to surface and thus, can be interrogated and possibly revised.

Teacher professional learning is frequently referred to as "continuous professional learning" yet the discontinuities revealed in this paper point to a need for a reappraisal of opportunities and engagement in learning throughout a career. Beginning with one's current knowledge, beliefs, and practice and then working backwards in order to better understand these aspects enables a deeper critical awareness of one's professional life. The questions that frame this narrative study may facilitate this exploration. Returning to one's starting point, reconnected to past experience, teachers may see their professional lives differently and be better prepared to direct their next steps toward professional learning in this era of accountability.

Appendix A. Interview prompts

Can you tell me about an early memory of learning mathematics (at school/university).

Can you draw a time-line, noting significant phases/events in your experience of learning mathematics?

In a professional gathering, how would you describe yourself to others?

How have you learnt how to be a mathematics teacher? Can you add significant phases/events to your time-line?

What is important in secondary school mathematics?

How did you come to know mathematics in the way that you do?

How does this influence you as a mathematics teacher?

What sources of support do you draw on as a (mathematics) teacher?

How do we learn mathematics? (to elicit an account of the nature of mathematics, of what it means to know and do mathematics)

Is there anything you wish you had known/understood earlier in your career?

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